

Translation

PATENT COOPERATION TREATY

PCT

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P60081PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/DE99/01159	International filing date (day/month/year) 15 April 1999 (15.04.99)	Priority date (day/month/year) 20 April 1998 (20.04.98)
International Patent Classification (IPC) or national classification and IPC C23C 28/02		
Applicant ATOTECH DEUTSCHLAND GMBH		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 29 October 1999 (29.10.99)	Date of completion of this report 12 July 2000 (12.07.2000)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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International application No.

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I. Basis of the report

1. This report has been drawn on the basis of (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

- ☐ the international application as originally filed.
- ☒ the description, pages 1-21, as originally filed,
 pages _____, filed with the demand,
 pages _____, filed with the letter of _____,
 pages _____, filed with the letter of _____.
- ☒ the claims, Nos. 1-11, as originally filed,
 Nos. _____, as amended under Article 19,
 Nos. _____, filed with the demand,
 Nos. _____, filed with the letter of _____,
 Nos. _____, filed with the letter of _____.
- ☐ the drawings, sheets/fig _____, as originally filed,
 sheets/fig _____, filed with the demand,
 sheets/fig _____, filed with the letter of _____,
 sheets/fig _____, filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	1-11	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-11	NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

2. Citations and explanations

This report makes reference to the following document:

D1: US-4 990 363

PCT Article 33(2)

D1 describes a method for producing adhesive metallic layers on fluoropolymer surfaces.

The first layer is deposited by decomposing organo-metallic compounds with a glow-discharge method.

The second metallic layer is deposited by means of a currentless or galvanic bath (column 2, lines 32-56).

D1 does not mention that the first metallic layer consists of Ni.

Claims 1 to 11 are therefore novel and meet the requirements of PCT Article 33(2).

PCT Article 33(3)

According to D1, organo-metallic compounds of the elements in the subgroups 1 and 8 are used, column 3, lines 4-7.

The examples use Cu, Pd, Pt and Au. The adhesiveness values can be seen in Tables 1 and 3. These layers are

firmly adhered.

D1 does not mention that the base material surface must be excessively roughened prior to the first metallic layer being deposited, as described in the letter of March 13, 2000.

D1 does not suggest that using Ni should be avoided. The subject matter of Claim 1 of the present application is therefore regarded as a selection from the known prior art.

The applicants have not shown an unexpected effect from using Ni as a first metallic layer. The application does not give any results with adhesiveness values.

Furthermore, Claim 1 is not limited to Ni for the first metallic layer. According to Claim 1, method step a, the first metallic layer contains an undefined amount of Ni. The content of the remainder of the metallic layer is also undefined.

The additional features of independent Claims 10 and 11 appear to be conventional.

Claims 1, 10 and 11 therefore do not meet the requirements of PCT Article 33(3).

Dependent Claims 2 to 9 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, could lead to a subject matter that involves an inventive step. The reasons therefor are as follows:

The features of Claims 3 and 4 are known from D1, column 2, lines 50-51.

Prior to the glow discharge method in D1, the surface is

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treated with a corrosive-gas. According to Example 3, a gas mixture of oxygen and tetrafluormethane is used as the corrosive gas, cf. also Table 2. The features of Claims 6 and 9 are therefore known from D1.

The applicants have not shown an unexpected effect for the features of Claims 2, 5, 7 and 8.

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

According to Claim 7, the average roughness value R_a is "no higher than 100 nm, preferably no higher than 20 μm ". Since 20 μm is very much higher than 100 nm, this should read 20 nm, as in the description, page 9, line 27.

The use of a method is the method, cf. Claims 10 and 11.